

IN THE CLAIMS

1-21 (Canceled)

22. (currently amended) A process for preparing a metal powder or a metal hydride powder comprising mixing an oxide of at least one of Ti, Zr, Hf, V, Nb, Ta and Cr with a reducing agent and heating the resultant mixture in an oven, optionally under an atmosphere of hydrogen until a reduction reaction starts, ~~and~~ leaching the reaction product; and

washing and drying the resultant product to yield the metal powder or metal hydride powder, wherein the oxide has a mean particle size of 0.5 to 20 μm , a BET specific surface area of 0.5 to 20 m^2/g and a minimum content of 94 wt.%.

23. (previously presented) A process according to claim 22, wherein the mixture is heated to 800 to 1400°C in an oven.

24. (previously presented) A process according to claim 22, wherein the oxide has a mean particle size of 1 to 6 μm .

25. (previously presented) A process according to claim 22, wherein the oxide has a BET specific surface area of 1 to 12 m^2/g .

26. (previously presented) A process according to claim 25, wherein the oxide has a BET specific surface area of 1 to 8 m^2/g .

27. (previously presented) A process according to claim 22, wherein the oxide has a minimum content of 96 wt.%.

28. (previously presented) A process according to claim 27, wherein the oxide has a minimum content of 99 wt.%.

29. (previously presented) A process according to claim 22, wherein the proportion of Fe and Al impurities in the oxide are each < 0.2 wt.%, calculated as the oxides.

30. (previously presented)A process according to claim 29, wherein the proportion of Fe and Al impurities in the oxide are each < 0.1 wt.%, calculated as the oxides.

31. (previously presented)A process according to claim 22, wherein the proportion of Si impurities in the oxide is < 1.5 wt.%, calculated as SiO₂.

32. (previously presented)A process according to claim 31, wherein the proportion of Si impurities in the oxide is < 0.3 wt.%, calculated as SiO₂.

33. (previously presented)A process according to claim 22, wherein the proportion of Na impurities in the oxide is < 0.05 wt.%, calculated as Na₂O.

34. (previously presented)A process according to claim 22, wherein the proportion of P impurities in the oxide is < 0.2 wt.%, calculated as P₂O₅.

35. (previously presented)A process according to claim 22, wherein the loss on ignition of the oxide at 1000°C as constant weights is < 1 wt.%.

36. (previously presented)A process according to claim 22, wherein the tamped down bulk density according to EN ISO 787-11 (previously DIN 53194) of the oxide is 800 to 1600 kg/m³.

37. (previously presented)A process according to claim 22, wherein a proportion of up to 15 wt.% of said oxide is replaced by an additive selected from the group consisting of MgO, CaO, Y₂O₃ and CeO₂.

38. (previously presented)A process according to claim 22, comprising reacting a reducing agent comprising an alkaline earth metal, alkali metal, or a hydride thereof with a compound to reduce the compound.

39 (previously presented)A process according to claim 38, wherein the reducing agent comprises at least one of Mg, Ca, CaH₂ or Ba.

40. (previously presented) A process according to claim 22, wherein the reducing agent has a minimum content of 99 wt.%.

41. (previously presented) A process according to claim 22, wherein the reaction is performed under a protective gas.

42. (previously presented) A process according to claim 22, wherein the reaction product is leached with hydrochloric acid.

43. (previously presented) A process according to claim 23, wherein the oxide used has a mean particle size of 1 to 6 μm .

44. (new) A process for preparing a metal powder or a metal hydride powder comprising mixing an oxide of at least one of Ti, Zr, Hf, V, and Cr with a reducing agent and heating the resultant mixture in an oven, optionally under an atmosphere of hydrogen until a reduction reaction starts, and leaching the reaction product; and

washing and drying the resultant product to yield the metal powder or metal hydride powder, wherein the oxide has a mean particle size of 0.5 to 20 μm , a BET specific surface area of 0.5 to 20 m^2/g and a minimum content of 94 wt.%.

45. (new) A process for preparing a metal powder or a metal hydride powder comprising sequentially mixing an oxide of at least one of Ti, Zr, Hf, V, Nb, Ta and Cr with a reducing agent and heating the resultant mixture in an oven, optionally under an atmosphere of hydrogen until a reduction reaction starts, leaching the reaction product; and

washing and drying the resultant product to yield the metal powder or metal hydride powder, wherein the oxide has a mean particle size of 0.5 to 20 μm , a BET specific surface area of 0.5 to 20 m^2/g and a minimum content of 94 wt.%.